

**WHAT IS CLAIMED IS:**

1. A distributed computing system for distributed web applications, supporting client/server affinity detection,  
5 comprising:

a server;

a client, adapted to send requests to the server; and  
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15 a numeric-valued generation ID, accompanying each request from the client to the server, incremented by the server upon receiving the request, and recorded by the server before being returned to the client, and such that if the generation ID accompanying a request from the client differs from the generation ID recorded by the server, an affinity break between the client and the server is detected.

20 2. The system as recited in claim 1, further comprising a plurality of clients adapted to send requests to the server, wherein each client has a unique user ID.

25 3. The system as recited in claim 2, further comprising an affinity command, which combines the generation ID accompanying a request with the user ID of the client sending the request, and by means of which the server may detect an affinity break with a particular client among the plurality of clients.

30 4. The system as recited in claim 3, wherein the server comprises a Java Virtual Machine (JVM) equipped with a cache.

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5. The system as recited in claim 4, further comprising a plurality of servers, wherein affinity between a client and first server may be broken as a result of the client sending a request to a second server.

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6. The system as recited in claim 4, wherein an affinity break between a client and a server may occur if the server becomes unavailable.

10 7. The system as recited in claim 4, wherein detection of an affinity break between a client and a server may be used to invalidate contents of the cache in the server.

15 8. The system as recited in claim 4, wherein the affinity command is sent by the server to the client and returned by the client to the server in a cookie.

9. The system as recited in claim 1, further comprising an object-oriented software system.

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10. A method for detecting affinity breaks between a client and a server equipped with a cache in a software system for distributed web applications, comprising:

25           the client sending a request to the server, accompanied by a numeric-valued generation ID (GID);

30           the server receiving the request and the GID from the client, and comparing the received GID against a previously recorded GID;

35           if the received GID matches the recorded GID, incrementing the recorded GID, and returning it to the client as the new GID; and

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- if the received GID does not match the recorded GID, reporting an affinity break between the client and the server.
- 5    11. The method as recited in claim 10, further comprising detecting affinity breaks between a plurality of clients and a server, wherein each client has a unique user ID.
- 10    12. The method as recited in claim 11, further comprising sending an affinity command with each request from a client, such that the affinity command combines the GID with the user ID of the client sending the request, and detecting an affinity break with a particular client among the plurality of clients by means of the user ID.
- 15    13. The method as recited in claim 11, wherein the software system comprises an object-oriented software system.
- 20    14. The method as recited in claim 12, further comprising detecting affinity breaks between a plurality of clients and a plurality of servers, each of which is equipped with a cache, such that affinity between a client and first server may be broken as a result of the client sending a request to a second server.
- 25    15. The method as recited in claim 14, wherein an affinity break between a client and a server may occur if the server becomes unavailable.
- 30    16. The method as recited in claim 15, wherein detection of an affinity break between a client and a server may be used to invalidate contents of the cache in the server.

17. The method as recited in claim 16, wherein the affinity command is sent by the server to the client and returned by the client to the server in a cookie.

5 18. A computer product, comprising a web server equipped with a cache and a software system, wherein the web server includes a processor, memory, mass storage and a network interface, and the software system is adapted to detect affinity breaks between a client and the web server.

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19. A computer program product in a computer readable medium for use in detecting affinity breaks between a client and a server, the computer program product comprising:

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instructions for the server receiving the request and the GID from the client, and comparing the received GID against a previously recorded GID;

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instructions for incrementing the recorded GID, and returning it to the client as the new GID, if the received GID matches the recorded GID; and

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instructions for reporting an affinity break between the client and the server, if the received GID does not match the recorded GID.

20. The product as recited in claim 19 further comprising:

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instructions for the client sending a request to the server, accompanied by a numeric-valued generation ID (GID);

21. A server including memory and processor detecting affinity breaks, comprising;

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means for the server receiving the request and the GID from the client, and

5 comparing the received GID against a previously recorded GID;

means for incrementing the recorded GID, and returning it to the client as the new GID, if the received GID matches the recorded GID; and

10 means for reporting an affinity break between the client and the server, if the received GID does not match the recorded GID.

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